
3 AFFECTED ENVIRONMENT

The CEQ's regulations implementing NEPA (40 CFR Part 1500) require documentation succinctly describing the environment of the area(s) to be affected by the alternatives under consideration, as well as a discussion of the impacts in proportion to their significance. The primary area of effect, or "affected environment" under the Proposed Action would be at the Defense CEETA complex within Fort Belvoir. It is at this location that physical and biological impacts would be concentrated. Socioeconomic, transportation, and air quality impacts would extend beyond this area, but would still be localized within the northwest part of Fort Belvoir and the surrounding area.

3.1 Land Use, Plans, and Coastal Zone Management

3.1.1 Land Use

Fort Belvoir

Fort Belvoir is an administrative and logistics center for the Military District Washington. The installation consists of two main, geographically separate areas - the Main Post and the Engineer Proving Ground (EPG). The Main Post is situated along the western shore of the Potomac River, about 85 mi (137 km) upstream of the Chesapeake Bay, while the EPG is situated on Accotink Creek, one of the major tributaries to the Potomac River, and northwest of the Main Post. The 7,836-ac (3,171 ha) Main Post lies east of Interstate 95, north of Gunston Cove, and south of Telegraph Road (State Route 611). The Main Post is bisected US Route 1 into the North Post (north of Route 1) and South Post (south of Route 1).

Local land uses outside of the installation are predominantly residential. Some scattered commercial and industrial development, such as the Newington Industrial Park and a number of retail shopping malls, occur along US Route 1 as well as near Interstate 95. There are several local, publicly owned tracts, including Huntley Meadows County Park, Pohick Bay Regional Park, the Washington Grist Mill, Mount Vernon Estate, Mount Vernon Parkway, Gunston Hall Plantation, Mason Neck National Wildlife Refuge, and Mason Neck State Park. Many of these tracts occur along the Potomac River, forming a band of riparian habitat along the river and its tributaries.

Table 3-1 and Figure 3-1 (Land Use at Fort Belvoir) show general land uses at Fort Belvoir. The "unimproved" category (Table 3-1) includes considerable areas of wetlands, forest, and riparian forest, much of which has been preserved as wildlife corridors and refuges. Certain unimproved land uses are considered environmentally sensitive, and are used for compatible forms of

recreation. Fort Belvoir's nearly 11 mi (18 km) of largely undeveloped shoreline is part of the unimproved land use category.

Table 3-1

General Land Use at Fort Belvoir

Category	Description	Approximate Area (acres/hectares)
Improved	Roads, walkways, parking lots, golf courses, and areas adjacent to buildings – all requiring intensive maintenance.	4,856/1,965
Semi-improved	Areas that require periodic maintenance – primarily weed and brush control	646/261
Unimproved	Natural areas requiring minimum maintenance.	3,154/1,276
Note: Land areas include the Fort Belvoir Main Post (including the Humphreys Engineer Center [HEC] and the Engineer Proving Ground (EPG)).		

Within the improved land use category specific uses at the installation include administrative, research and development, medical, community facilities, housing (troop and family), service and storage, recreation, and training.

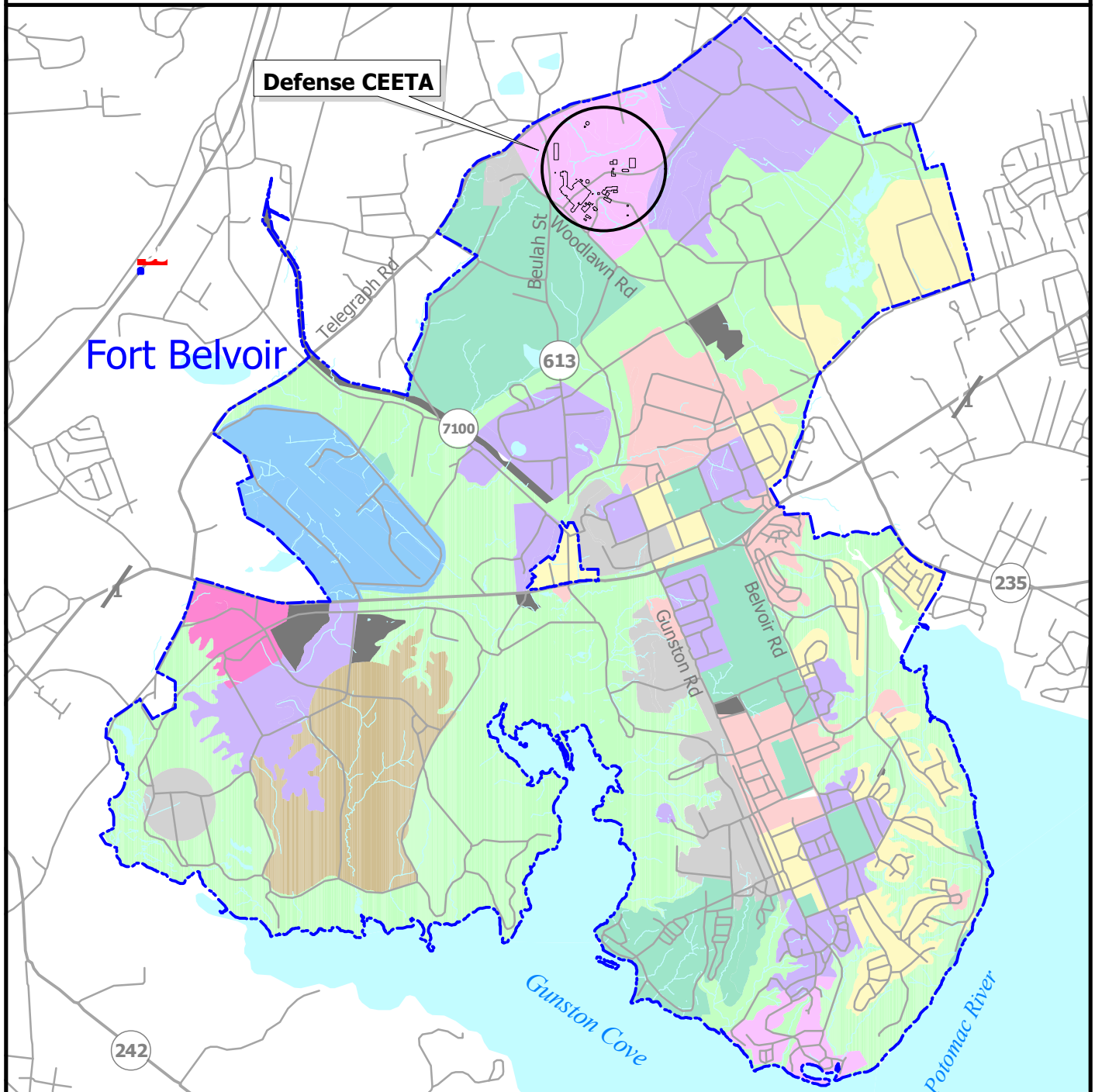
The *Real Property Master Plan, Fort Belvoir, Long Range Component* (US Army Garrison Fort Belvoir, May 1993), divides the installation into six planning districts:

- South Post.
- South Post Core Area.
- Southwest Area.
- Lower North Post.
- Upper North Post.
- Davison Army Airfield.

Defense CEETA

The existing 263-ac (106.4-ha) Defense CEETA complex is situated in the Upper North Post of the installation. Table 3-2 lists the land uses by military function in this planning district. Figure 3-2 (Land Use at Defense CEETA) shows the existing general land use categories within the Defense CEETA complex.

Existing Land Use at Fort Belvoir

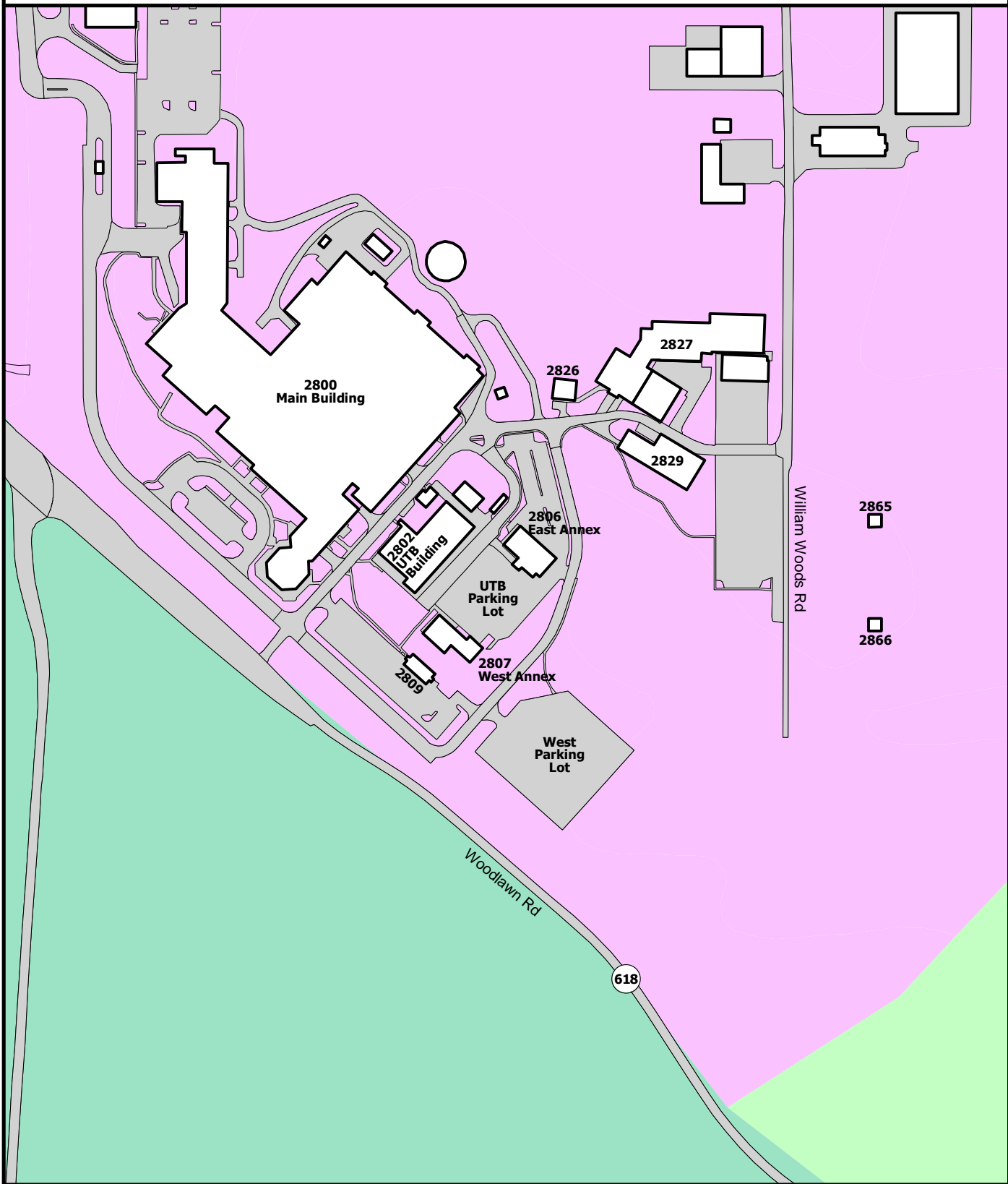





- Administration/Education
- Airfield
- Community Facility
- Environmentally Sensitive
- Industrial
- Medical
- Outdoor Recreation
- Research and Development
- Supply/Storage/Maintenance
- Training Range
- Troop Housing/Family Housing/Accotink Village
- Fort Belvoir Property Boundary



Figure 3-1

Land Use at Defense CEETA



-  Research and Development
-  Outdoor Recreation
-  Environmentally Sensitive

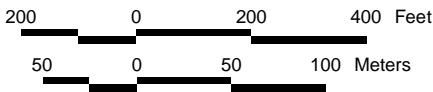


Figure 3-2

Table 3-2

Land Use at Fort Belvoir's Upper North Post

Category	Building Area (square feet/square meters)
Administration	130,979/12,168
Supply Storage	93,372/8,674
Community Facility	15,178/1,410
Outdoor Recreation	3,597/334
Research and Development	578,916/53,781
Total Building Area	822,042/76,368
Note: Excludes the Humphreys Engineer Center. Source: Adapted from Real Property Master Plan, Fort Belvoir, Long Range Component – 1993.	

Within the complex there are several installation buildings that include a Main Building; several smaller buildings and structures; a parking garage; several large paved surface parking areas; and an internal roadway system enclosed by a perimeter security fence. A visitor processing facility was recently built at the entrance from Telegraph Road in the area's northwest corner. Much of the land area within the security fence remains undeveloped, in secondary-growth forest. There are landscaped areas and gardens surrounding the Main Building.

The area where the proposed T Block addition that is the subject of this EA would be built consists of: a parking lot adjacent to the UTB Building and two triple-wide trailers used as administrative and office space comprising the East Annex. The proposed parking structure would be built in the existing West Parking Lot, to the south and across an internal road from the proposed site of T Block.

3.1.2 Plans

Fort Belvoir Master Plan

New development in the Upper North Post Planning District is intended for tenant administration functions, such as DoD headquarters facilities and regional functions (US Army Garrison Fort Belvoir, May 1993). The desired character of development in this planning district is clusters of high-density development separated by natural areas in order to preserve environmentally sensitive land and open space. Development within the clusters could include structured parking

to allow for maximum development potential while preserving open areas. Lot coverage is limited to an average of 20 percent to preserve sensitive areas and significant amounts of open space.

Defense CEETA Master Plan

Defense CEETA's 1996 *Draft Master Plan Report* identified two approaches to site design and building massing. The T Block is identified as a Conceptual Unbudgeted Building Expansion under one of these approaches. The T Block is visualized in that report as the T and U Blocks, with the T Block being a two-level structure, fully-sprinkled, and of 63,500 gross sq ft (5,899 gross sq m) on the site of the temporary annex operations facility, with expansion potential for the U Block to 120,300 sq ft (11,176 sq m). The concept has been changed slightly (increased to 122,000 gross sq ft [11,334 sq m] at maximum potential build-out), but the *Draft Master Plan* also indicates that all design concepts should be upgraded as needed.

National Capital Planning Commission

The National Capital Planning Commission (NCPC) is the central planning agency for the federal government in the National Capital Region, which encompasses the District of Columbia and the following surrounding jurisdictions: in Maryland, Montgomery and Prince George's Counties; in Virginia, the city of Alexandria, and Arlington, Fairfax, Prince William, and Loudoun Counties. NCPC prepares the Federal Elements of the Comprehensive Plan for the National Capital (CPNC), which establishes goals and planning policies for the growth and development of the National Capital Region and provides a framework for policy decisions pertaining to development in this area. The NCPC reviews plans and programs proposed by state, regional, and local agencies for their impact on the federal interest.

3.1.3 Coastal Zone Management

The Coastal Zone Management Act (CZMA) of 1972 (16 USC § 1451, et seq., as amended) provides assistance to states, in cooperation with federal and local agencies, for developing land and water use programs in coastal zones. Section 307(c)(1) of the Coastal Zone Management Act Reauthorization Amendment (CZMARA) stipulates that federal projects that affect land uses, water uses, or coastal resources of a state's coastal zone must be consistent to the maximum extent practicable with the enforceable policies of that state's federally-approved coastal management plan.

The Commonwealth of Virginia has developed and implemented a federally-approved Coastal Resources Management Program (CRMP) describing current coastal legislation and enforceable policies. The actions subject to federal consistency include the following:

- Commercial fishing.
 - Recreational fishing in freshwater tidal rivers.
 - Encroachments on subaqueous lands.
 - Encroachments on wetlands.
 - Encroachments on primary sand dunes.
 - Land-disturbing activities needing erosion and sediment control.
 - Actual or potential wastewater discharges.
 - Control of septic and other on-site domestic waste systems.
 - Coastal land management.
 - Air pollution control.
-

3.2 Socioeconomics

3.2.1 Demographics

Fort Belvoir is located in southern Fairfax County, Virginia (Figure 1-1). It is host to approximately 90 tenant and satellite organizations with about 20,000 direct military and civilian employees, and 4,700 dependents living on-post (Fort Belvoir Website, July 2002).

The proposed action would add 250 new employees the Defense CEETA workforce on Fort Belvoir. While it is likely that a high proportion of those new hires would be recruited in the Washington DC area, they also could come from other regions of the United States and move their residence here. For the purpose of this analysis, it has been assumed that most potential new recruits likely live or would settle within 30-mi (48-km) of the post. Jurisdictions within this radius include:

- In Virginia: the counties of Fairfax, Prince William, Fauquier, Stafford, King George, Loudoun, and Arlington; and the city of Alexandria.
- In Maryland: Montgomery, Prince George's, and Charles Counties.
- Washington, DC.

Basic demographic data for this area are provided in Table 3-3. More detailed information on Fairfax County is presented in Table 3-4.

Table 3-3

Fort Belvoir Demographic Region

County/City	Population 2000	Population 1990	Percent Change since 1990	Housing Units 2000	Housing Units 1990	Percent Change since 1990
Fairfax, VA	969,749	818,584	18.5	359,411	307,966	16.7
Prince William, VA	280,813	215,686	30.2	98,052	74,759	31.2
Loudoun, VA	169,599	86,129	96.9	62,160	32,932	88.8
Stafford, VA	92,446	61,236	51	31,405	20,529	53
Fauquier, VA	55,139	48,741	13.1	21,046	17,716	18.8
King George, VA	16,803	13,527	24.2	6,820	5,280	29.2
Arlington, VA	189,453	170,936	10.8	90,426	84,847	6.6
Alexandria, VA	128,283	111,183	15.4	64,251	58,252	10.3
Montgomery, MD	873,341	757,027	15.4	334,632	295,723	13.2
Pr. George's, MD	801,515	729,268	9.9	302,378	270,090	12
Charles, MD	120,546	101,154	19.2	43,903	34,487	27.3
Washington, DC	572,059	606,900	- 5.7	274,845	278,489	- 1.3
Total	4,269,746	3,720,371	14.8	1,689,329	1,483,060	13.9

Source: Census Bureau Website, July 2002.

Table 3-4

Fairfax County Demographic Overview

Year	Population		Households		Housing Units	
	Number	Percent Change ¹	Number	Percent Change ¹	Number	Percent Change ¹
1980	596,901	n/a	205,200	n/a	215,600	n/a
1990	818,584	37.1	292,345	42.5	307,966	40.3
2000	969,749	18.5	353,136	20.8	359,411	16.7
2005 ²	1,050,547	8.3	381,245	8	387,857	7.9
2010 ²	1,123,128	7	409,230	7.3	416,399	7.4

Note: 1. Percent change from previous row data.
2. Fairfax County Projections
Source: Fairfax County Website, July 2002; Census Bureau Website, July 2002.

As is evident in Tables 3-3 and 3-4, Fort Belvoir is part of a large and growing metropolitan area with a 2000 population of over 4.2 million people. Fairfax County is the most populous of the jurisdictions in that area, accounting for almost 23 percent of its entire population. As shown in Table 3-4, Fairfax County has experienced dramatic demographic growth over the last two decades. Growth is expected to continue in the coming years, but at a slower rate than previously, as lower costs of living draw more new residents to counties such as Prince William, Loudoun, or Stafford.

3.2.2 Age, Race, and Ethnicity

Table 3-5 shows the racial and ethnic distribution of the resident population of the Fort Belvoir Census Designated Place (Census Designated Places [CDP]. CDPs are non-incorporated areas identifiable by name and with a sufficient density of population to justify singling them out for census purposes. The Fort Belvoir CDP coincides roughly with the boundaries of the Installation). Accotink Village is a residential enclave surrounded by Fort Belvoir on all sides but not associated with the installation and located approximately one mi (1.6 km) south of the project site. Table 3-5 also shows racial and ethnic distribution for Fairfax County and Virginia as a whole. As can be seen, The Fort Belvoir CDP, Accotink Village, and Fairfax County all are home to proportionally more non-white minorities than the state as a whole. In particular, more than half the population of Accotink Village (210 out of 390 residents), belongs to a racial or ethnic minority.

Table 3-5

Race and Ethnicity (2000)
(Percent)

Jurisdiction	White	Black ¹	Other Non-White	Two or More Races	Total Non-White Population	Hispanic ²
Fort Belvoir CDP	55.7	31.8	8.2	4.3	44.3	10.5
Accotink Village ³	46.2	37.4	12.1	4.3	53.8	7.9
Fairfax County	69.9	8.6	17.9	3.7	30.1	11
State of Virginia	72.3	19.6	6.1	2	27.7	4.7
Source: US Census Bureau Website, July 2002. Notes: 1. Having origins in any of the black racial groups of Africa. 2. Hispanic origin, may be of any race. 3. Block group 2 of census tract 4220.						

Table 3-6 shows the proportion of minors living in each of the above jurisdictions. Only the Fort Belvoir CDP has a higher proportion of under-18 residents than the state as a whole, reflecting the presence of many military families housed on the post.

Table 3-6
2000 Under-18 Population (Percent)

Jurisdiction/Area	Population under 18
Fort Belvoir CDP	44.4
Accotink Village ¹	20.3
Fairfax County	25.4
State of Virginia	24.5
Note 1. Block group 2 of census tract 4220. Source: US Census Bureau Website, August 2001.	

3.2.3 Income and Employment

Based on Census 2000 results, Table 3-7 shows 1999 median household income, median family income, and proportion of persons living in poverty for the Fort Belvoir CDP, Fairfax County, and Virginia as a whole. No such data are as yet available for Accotink Village. However, Census 1990 data indicate that in 1989, the median household income in Accotink Village was \$16,719, as opposed to \$59,284 for Fairfax County and \$33,328 for Virginia as a whole. Thus, Accotink Village was significantly poorer than the surrounding jurisdictions. Fairfax County, however, is generally considered one of the most prosperous jurisdictions in the Washington, DC, area and even in the United States.

Table 3-7
Median Income and Poverty(1999)

Jurisdiction	Median Household Income (\$)	Median Family Income (\$)	Persons Living in Poverty (Percent)
Fort Belvoir CDP	39,592	39,107	5.6
Fairfax County	81,050	92,146	4.5
State of Virginia	46,677	54,169	9.6
Source: US Census Bureau Website, July 2002.			

The Virginia Employment Commission reported the unemployment rate in Fairfax County for May 2002 to be three percent. In 2001, the county had a total civilian labor force of approximately 575,700.

3.3 Community Facilities and Services

3.3.1 Safety and Security

Safety and security issues at Fort Belvoir are handled by the Army's Military Police (MP) and Fire and Emergency Medical Services (EMS). The MP headquarters are on South Post at Pohick Road and 12th Street. There are two additional MP stations: Unit 1 on South Post at Middleton Road and 21st Street, and Unit 2 on North Post at Goethals Road and Black Road. There are three fire stations: No. 65 on South Post; No. 63 on North Post; and No. 66 at Davison Airfield. Five fire companies, with a total staff of 66, serve the installation (two crash companies serve Davison Airfield). At least 21 firefighters are on duty at any given time. EMS personnel are trained at least to the level of Emergency Medical Technician (EMT). The fire department fields three engines and one truck (Sullivan, February 17, 2000).

The Fairfax County Police Department provides public safety services throughout the county, with the exceptions of Fort Belvoir, several municipalities (e.g., Herndon, Alexandria, and Vienna), and Dulles Airport. It divides the county administratively into seven district stations that employ 1,050 officers supported by 400 civilian personnel (Fairfax County Website, November 2000).

The Fairfax County Fire and Rescue Department is a combined career and volunteer organization providing fire suppression, rescue, and EMS, among other functions. It employs 1,139 uniformed staff and 85 civilian staff. It also includes 384 operational volunteers and 533 administrative volunteers. Services are provided from 34 stations, strategically located throughout the county. Those stations closest to Fort Belvoir are Woodlawn, Lorton, Gunston, and Kingstowne (Fairfax County Website, November 2000).

3.3.2 Medical Services

Medical needs of military personnel (and, in an emergency, civilian personnel) at Fort Belvoir are served by the De Witt Army Community Hospital, located on South Post. This facility provides a full array of medical services with 60 beds and an occupancy rate of about 50 percent (Wilkinson, February 17, 2000). The hospital also provides a family health center offering primary care. The hospital is proposing to construct a new, updated facility on the North Post. The Logan Dental Clinic is located near the De Witt Army Community Hospital. Three additional dispensaries are located at Fort Belvoir, two close to residential areas, and a third at Davison Army Airfield. Three additional Army Family Health Centers are located nearby in

Northern Virginia: at Woodbridge; at Fort Myer; and in Fairfax. These Army hospitals may only serve civilian DoD workers if injured on the job. Other civilian medical facilities close to Fort Belvoir are discussed below.

The Fairfax County Department of Health provides a wide range of public health programs, including 11 health care centers located throughout the county and three primary health care centers for low-income uninsured county residents. A map generated by the Fairfax County Geographic Information System (GIS) and Mapping Service shows 15 hospital urgent-care facilities in the county and five others in nearby Arlington and Alexandria. Beside De Witt Army Community Hospital, the closest hospital to Fort Belvoir is Mount Vernon, about five miles to the northeast (Fairfax County Website, November 2000).

3.3.3 Open Space and Recreation

Fort Belvoir offers numerous opportunities for recreation. Recreational facilities occupy 1,123 ac (454 ha) of the installation in areas convenient to the population they serve. These facilities include (US Army Garrison Fort Belvoir, March 2001):

- Clubs for officers and non-commissioned officers.
- Nine-hole golf course on South Post, 36-hole golf course on Upper North Post.
- Tennis courts.
- Swimming pools.
- Athletic fields.
- An archery range.
- Three picnic areas.
- Several playgrounds.
- Six soccer fields.
- Two football fields.
- Several softball fields.
- Extensive walking and running areas.
- A youth services center with summer camp. The Sosa Community Center, with a variety of recreational amenities.

In addition, the Dogue Creek marina rents boats and offers 105 wet slips and 300 dry-storage facilities, rented on an annual basis (US Army Garrison Fort Belvoir, March 2001). Additional facilities at the marina include two boat-launch ramps, pump-out stations, and electric and water hookups.

The Fairfax County Park Authority operates over 350 parks on more than 18,300 acres. Facilities include a horticulture center, a working farm, an activities/equestrian center, eight indoor recreational centers, five nature and visitor centers, eight golf courses, two campgrounds, an ice-

skating rink, and a water park. A wide variety of activities and programs are operated at the county parks and recreational centers.

3.4 Transportation

3.4.1 Highway and Street Network

The Defense CEETA site on Fort Belvoir is served by the northern Virginia regional freeway and arterial transportation network, many sections of which are congested during both morning and afternoon commuting periods. This transportation system analysis addresses both the on-post transportation network and the connections between the post network and the regional transportation network.

In the vicinity of Fort Belvoir, the northern Virginia highway system primarily consists of four roadways that serve as both local commuter routes and longer-distance non-commuter routes. These roadways (shown on Figure 3-3, Fort Belvoir Area Roads) are:

- Interstate 95.
- US Route 1 (Jefferson Davis Highway).
- Fairfax County Parkway.
- Telegraph Road.

I-95 is a freeway that runs in a north-south direction approximately two mi (3.2 km) northwest of Fort Belvoir. Access to Fort Belvoir from I-95 is primarily via an interchange with the Fairfax County Parkway. Two other interchanges, at Lorton Road and Route 1, also provide access to Fort Belvoir, predominantly from the south. In 2000, I-95 carried approximately 170,000 vehicles per day in the vicinity of Lorton Road/Fairfax County Parkway.

US Route 1 is classified as a principal arterial with a generally north-south regional orientation. However, across Fort Belvoir, it runs in an east-west direction. Through the Installation, Route 1 is primarily a four-lane undivided highway with exclusive turn lanes at major intersections. Access to Fort Belvoir is provided via three gates. In 2000, Route 1 carried approximately 32,000 vehicles per day within the Installation's boundaries.

The Fairfax County Parkway is classified as a principal arterial. A four-lane divided facility, it connects Fort Belvoir to I-95. A major access point to the North Post is via John J. Kingman Road, which intersects with the parkway north of Route 1. In 2000, the Fairfax County Parkway accommodated about 27,000 vehicles per day on the roadway segment north of John J. Kingman Road.

Telegraph Road, classified as a minor arterial, runs along the northern boundary of Fort Belvoir. It has recently been upgraded to a four-lane facility. The Beulah Street entrance from Telegraph

Road used to be a major access point to the Post. Since the events of September 11, 2001, however, it has been closed to all traffic. In 2000, Telegraph Road carried approximately 17,000 vehicles per day in the vicinity of Fort Belvoir.

3.4.2 Existing Traffic Conditions

Traffic data collection for this EA was completed in March, April, and May 2002. It reflects normal operating conditions at and near Fort Belvoir at that time. After the terrorist attacks of September 11, 2001, the Post instituted stricter access controls that have so changed travel patterns to and within Fort Belvoir that pre-September 11 traffic data are no longer pertinent.

3.4.2.1 Existing Traffic Volumes

The manual turning-movement traffic counts were obtained in March 2002 at the following eight intersections during morning and afternoon peak periods:

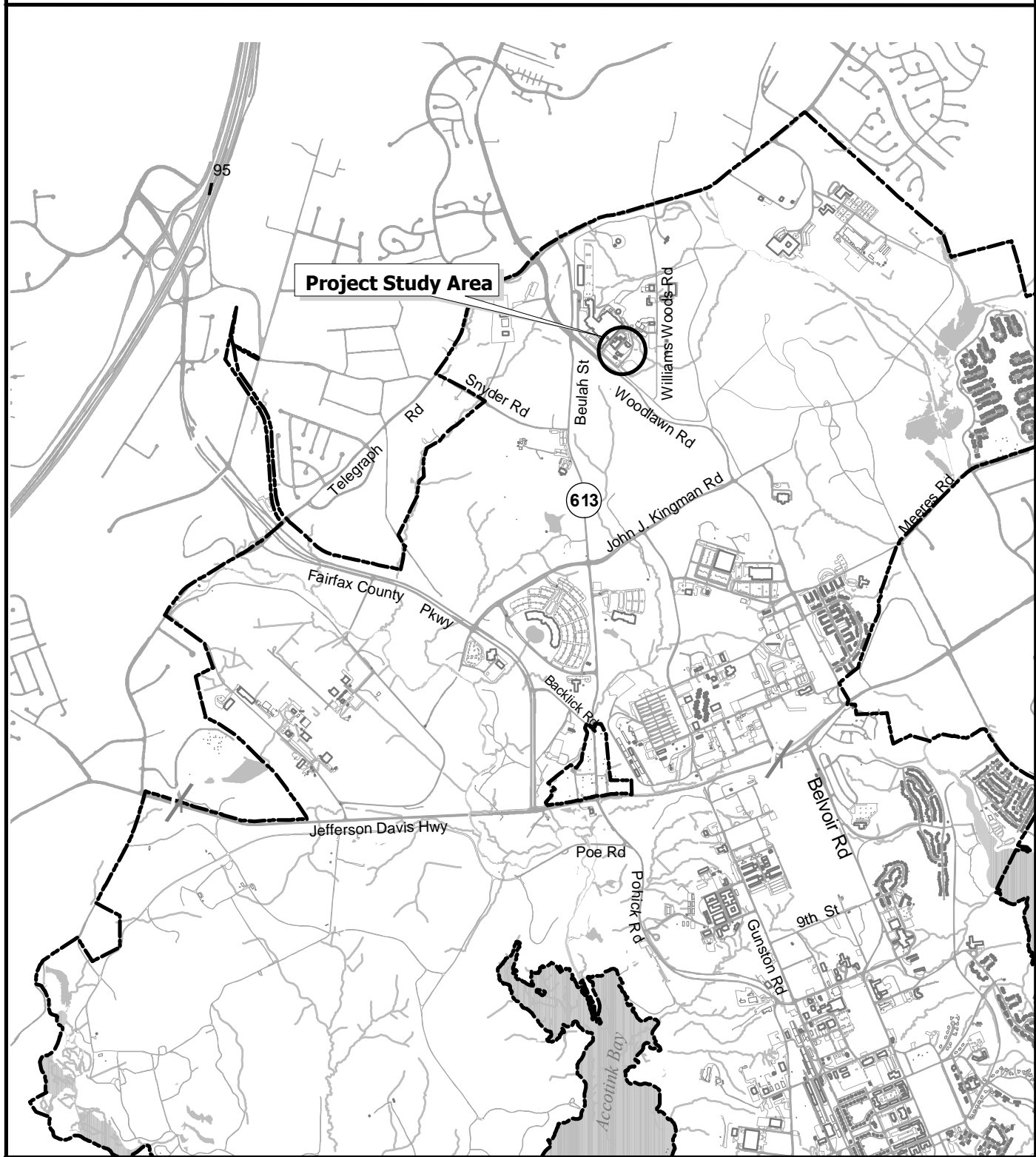
- Telegraph Road and Defense CEETA Entrance.
- Telegraph Road and Beulah Street.
- Telegraph Road and Newington Road.
- Telegraph Road and the Northbound (NB) Fairfax County Parkway (FCP) Ramps.
- Telegraph Road and the Southbound (SB) Fairfax County Parkway Ramps.
- Fairfax County Parkway and Kingman Road.
- Kingman Road and Beulah Street.
- Kingman Road and Gunston Road.

All these intersections are currently signalized. A summary of the peak-hour turning-movement counts for these intersections is included in Appendix B.

3.4.2.2 Traffic Analysis Methodology

Traffic operations are a function of traffic volume and available roadway capacity. The ratio between the volume and capacity is termed the volume-to-capacity (V/C) ratio. The standard industry procedure for determining the V/C ratio of a roadway facility is the 1997 *Highway Capacity Manual*. The *Highway Capacity Manual* contains planning-level procedures for assessing the adequacy of signalized intersections, two-way stop-controlled intersections, and four-way (or all-way) stop-controlled intersections. In each case, the procedures take into account the number of vehicles turning or proceeding straight through the intersection, the number of lanes provided for each turning movement, and the likely conflicts among turning vehicles.

Fort Belvoir Area Roads



----- Fort Belvoir Property Boundary

2000 0 2000 4000 Feet
500 0 500 1000 Meters



Figure 3-3

For signalized intersections, conflicts are quantified through the calculation of a numerical value termed “critical lane volume.” The critical lane volume is divided by the intersection capacity to obtain a volume/capacity (V/C) ratio. Significant V/C thresholds are summarized in Table 3-8.

Table 3-8
Level of Service Criteria for Signalized Intersections

V/C Ratio	Assessment	Description
<0.85	Under Capacity	Stable flow, slight delays
0.85-0.95	Near Capacity	Approaching unstable flow, acceptable delays
0.95-1.00	At Capacity	Unstable flow, congested, unacceptable delays
>1.00	Over Capacity	Forced flow, oversaturation
Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, 1997.		

3.4.2.3 Existing Levels of Service

A traffic operational analysis was conducted for each of the study intersections. A summary of LOS under existing conditions is presented in Table 3-9. The only intersection currently over capacity is Fairfax County Parkway and Kingman Road in the PM peak hour.

Table 3-9

Levels of Service - Existing Conditions

Signalized Intersections	AM		PM	
	V/C Ratio	Capacity Status	V/C Ratio	Capacity Status
Telegraph Road/Defense CEETA Entrance	0.40	Under Capacity	0.48	Under Capacity
Telegraph Road/Beulah Street	0.65	Under Capacity	0.75	Under Capacity
Telegraph Road/Newington Road	0.54	Under Capacity	0.67	Under Capacity
Telegraph Road/FCP NB Ramps	0.66	Under Capacity	0.56	Under Capacity
Telegraph Road/FCP SB Ramps	0.72	Under Capacity	0.67	Under Capacity
Fairfax County Pkwy/Kingman Road	0.76	Under Capacity	1.39	Over Capacity
Kingman Road/Beulah Street	0.24	Under Capacity	0.41	Under Capacity
Kingman Road/Gunston Road	0.29	Under Capacity	0.28	Under Capacity
Source: TransCore, 2002.				

3.4.3 Transit System

3.4.3.1 Transit Service to Fort Belvoir Site

There is currently no transit service directly to the Defense CEETA site along Telegraph Road. One Fairfax Connector route (Route 203) comes to within approximately 0.4 mi (0.64 km) of the Defense CEETA building at the intersection of Telegraph Road and Beulah Street. Two additional Fairfax Connector routes (Routes 108 and 301) currently operate to the Humphreys Engineer Center located approximately three-quarters of a mile (1.2 km) from the entrance to Defense CEETA. Service for these three routes is described below.

Fairfax Connector Route 203 – This route operates between the intersection of Telegraph Road and Mount Air Drive (approximately 1.5 mi [2.4 km] southwest of the Defense CEETA entrance) and the Van Dorn Metrorail station in Alexandria. The route operates primarily via Telegraph Road, Beulah Street, Kingstowne Village Parkway, and South Van Dorn Street. At the intersection of Telegraph and Beulah, the route comes within 800 ft (244 m) of the roadway entrance to Defense CEETA and approximately 0.4 mi (0.64 km) of the building entrance. The route operates during peak periods and evenings only (from 5:32 AM to 9:34 AM and from 3:25

PM to 9:45 PM), at a 30-minute frequency during the peak periods and at a 60-minute frequency in the evening.

Fairfax Connector Route 108 – This route operates between the Humphreys Engineer Center (approximately three-quarters of a mile [1.2 km] northeast of the Defense CEETA entrance) and the Huntington Metrorail Station, primarily via Telegraph Road and South Kings Highway. The route operates to the Humphreys Engineer Center at an approximately 30-minute frequency during the peak periods only (5:44 AM to 9:32 AM and 3:22 PM to 7:00 PM).

Fairfax Connector Route 301 – This route operates between the Humphreys Engineer Center and the Franconia-Springfield Transportation Center. The route operates primarily via Telegraph Road, Hayfield Road, and the Franconia-Springfield Parkway. Service is provided to the Engineer Center during the peak periods and evenings only (6:24 AM to 9:39 AM and 3:25 PM and 9:28 PM). Peak period frequencies are approximately 30 minutes, while evening service is operated on a 60-minute frequency.

3.4.3.2 Transit Usage

Since July 2001, average daily ridership on the three routes is as follows. Route 203 is averaging approximately 400 passengers per day; Route 108 is averaging approximately 220 passengers per day; and Route 301 is carrying approximately 250 passengers daily. At current service levels, all three routes have adequate capacity for their existing ridership and to handle significant ridership growth.

No specific ridership counts or survey data exist for the Defense CEETA area. However, given the fact that the closest route (Route 203) is located approximately 0.4 miles (0.64 km) from the Defense CEETA building, it is unlikely that there is any significant transit ridership to Defense CEETA at the current time.

3.5 Air Quality

3.5.1 National Ambient Air Quality Standards

The USEPA, under the requirements of the 1970 Clean Air Act (CAA) as amended in 1977 and 1990, has established National Ambient Air Quality Standards (NAAQS) for six contaminants, referred to as criteria pollutants (40 CFR 50). These are: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂). The NAAQS include primary and secondary standards. The primary standards (Table 3-10) were established at levels sufficient to protect public health with an adequate margin of safety. The secondary standards were established to protect the public welfare from the adverse effects associated with pollutants in the ambient air. A description of the criteria pollutants and their effects on the public health and welfare is presented in Table 3-11.

The CAA requires that the USEPA review scientific data every five years to ensure that the NAAQS effectively protect the public health. The USEPA has enacted a more stringent standard for O₃, which became effective on September 16, 1997. The final standard has been updated from 0.12 parts per million (ppm) of O₃ measured over one hour to a standard of 0.08 ppm measured over eight hours, with the average fourth-highest concentration over a three-year period determining whether or not an area is in compliance.

Additionally, a new standard for PM₁₀ was issued on July 18, 1997 by the USEPA. The standard for PM₁₀ remains essentially unchanged, while a new standard for fine particles (PM_{2.5}: diameter 2.5 micrometers) is set at an annual limit of 15 micrograms per cubic meter (µg/m³), with a 24-hour limit of 65 µg/m³. Because this new standard would regulate fine particulates for the first time, the USEPA will allow five years to build a nationwide monitoring network and to collect and analyze the data needed to designate areas and develop implementation plans.

Both revised O₃ and new PM_{2.5} standards were contested in court over the last few years. In February 2001, the Supreme Court upheld USEPA's authority under the CAA to set national air quality standards. On March 26, 2002, the District of Columbia Circuit Court rejected all remaining challenges to both standards. Therefore, USEPA will move forward with programs to implement both new standards.

3.5.2 National Ambient Air Quality Standard Attainment Status

Areas that meet the NAAQS for a criteria pollutant are designated as being "in attainment." Areas where a criteria pollutant level exceeds the NAAQS are designated as being "in nonattainment." O₃ nonattainment areas are categorized based on the severity of their pollution problem - marginal, moderate, serious, severe, or extreme. CO and PM₁₀ nonattainment areas are categorized as moderate or serious nonattainment areas. Where insufficient data exist to determine an area's attainment status, it is designated as unclassifiable (or in attainment). Fort Belvoir is located along the western shore of the Potomac River, in Fairfax County, Virginia, an area currently designated as being in:

- Serious nonattainment for O₃.
- Attainment for all other criteria pollutants.

Table 3-10

National and Virginia Ambient Air Quality Standards

Pollutant and Averaging Time	Primary Standard		Secondary Standard	
	$\mu\text{g}/\text{m}^3$	ppm	$\mu\text{g}/\text{m}^3$	ppm
Carbon Monoxide				
8-hour concentration	10,000 ¹	9 ¹	Same as primary	
1-hour concentration	40,000 ¹	35 ¹		
Nitrogen Dioxide				
Annual Arithmetic Mean	100	0.053	Same as primary	
Ozone				
8-hour concentration	157 ²	0.08 ²	Same as primary	
1-hour concentration	235 ³	0.12 ³		
Particulate Matter				
PM2.5:			Same as primary	
Annual Arithmetic Mean	15 ⁴	-		
24-hour Maximum	65 ⁵	-		
PM10:				
Annual Arithmetic Mean	50 ⁴	-		
24-hour concentration	150 ⁶	-		
Lead				
Quarterly Arithmetic Mean	1.5	-	Same as primary	
Sulfur Dioxide				
Annual Arithmetic Mean	80	0.03	-	-
24-hour concentration	365 ¹	0.14 ¹	-	-
3-hour concentration	-	-	1300 ¹	0.50 ¹
Notes: ¹ Not to be exceeded more than once per year. ² 3-year average of the 4th highest 8-hour concentration may not exceed 0.08 ppm. ³ Areas not attaining the 1-hour standard must meet that standard before demonstrating attainment with the 8-hour standard. ⁴ Based on 3-year average of annual averages. ⁵ Based on 3-year average of annual 98th percentile values. ⁶ Based on a 3-year average of annual 99th percentile values. Source: 40 CFR 50; USEPA Fact Sheets, July 1997. <i>Virginia Ambient Air Monitoring 2000 Data Report</i> , VDEQ.				

Table 3-11

Criteria Pollutants - Their Sources and Effects

Pollutants and Their Sources	Health and Welfare Effects
Ozone (O₃): O ₃ is not emitted directly into the atmosphere. It is formed in the atmosphere by a series of complex chemical reactions primarily involving nitrogen dioxides and volatile organic compounds in the presence of heat and sunlight. These reactions are time-dependent and usually take place far downwind from the site where these ozone precursors were originally emitted. Typical sources of these precursors are motor vehicle exhaust and industrial processes using solvents.	Health: O ₃ is a highly reactive gas that irritates the mucous membranes and other lung tissues, causing respiratory impairment. O ₃ has been found to affect those with respiratory problems, such as asthma, as well as healthy adults and children. Effects include breathing difficulty while exercising and reduced resistance to respiratory infections. Acute exposures cause bronchial constriction, lung edema, and abnormal lung development. Welfare: Toxic to plants, causing leaf damage and decrease in growth. Weakens materials such as rubber and fabrics.
Carbon Monoxide (CO): The major source of CO is the incomplete combustion of fuels used to power engines, etc. Motor vehicles are the principal source of urban CO emissions. CO is a site-specific pollutant with high levels found near the source, such as at heavily-congested intersections. Other sources include power plants, industrial processes, and space heating.	Health: CO enters the bloodstream by combining with hemoglobin, which reduces the amount of oxygen carried to organs and tissue. The health threat is most severe for those with cardiovascular disease. Healthy individuals are affected at higher concentrations (>30 ppm). Symptoms include shortness of breath, chest pain, headaches, confusion, and loss of coordination. Welfare: No known effect on materials or vegetation.
Sulfur Dioxide (SO₂): SO ₂ results largely from the combustion of sulfur-bearing fuels such as coal and oil combustion in heat and power generation facilities. Other sources include pulp and paper mills, refineries, and nonferrous smelters. The combustion of gasoline and diesel fuels in motor vehicles accounts for a very small percentage of the total sulfur dioxides emitted.	Health: SO ₂ combines with water vapor to form acidic aerosols which irritate the respiratory tract. It aggravates symptoms associated with chronic lung diseases such as asthma and bronchitis. Welfare: SO ₂ is a primary contributor to acid deposition, which causes acidification of lakes and streams. Acid deposition also damages materials (corrodes metals, degrades rubber and fabrics), injures vegetation, and causes visibility degradation.
Nitrogen Dioxide (NO₂): NO ₂ is formed in the atmosphere from the oxidation of nitric oxide (NO). The major sources of NO is fuel combustion in boilers and engines associated with power plants, motor vehicles, industrial furnaces and space heating.	Health: NO ₂ can cause irritation to the lungs, lower resistance to respiratory infections, and aggravate symptoms associated with asthma and bronchitis. Welfare: NO ₂ decreases visibility by causing a reddish-brown haze. It is a contributor to acid deposition, which causes acidification of lakes and streams, as well as plant injury and damage to materials (metals, rubber, fabric).
Particulate Matter (PM₁₀): PM, which occurs as a result of incomplete combustion, consists of tiny airborne particles or aerosols combined with dust, dirt, smoke, and liquid droplets. PM ₁₀ is PM with an aerodynamic diameter of 10 microns or less. Sources of PM are factories, power plants, motor vehicles, construction activities, and fires. More particulates are contributed to the atmosphere by diesel fuel than gasoline.	Health: PM ₁₀ particles, because of their small size, are able to be inhaled and reach the thoracic region of the respiratory system. The health effects are often not immediately noticed. The particles can accumulate in the lungs after long-term exposure and affect breathing and respiratory symptoms. The lungs' natural cleansing and defense mechanisms are impaired. Welfare: Causes soiling and corrosion to materials. Decreases visibility by forming atmospheric haze.
Lead (Pb): The primary source for airborne Pb used to be motor vehicles, but the use of unleaded gas has dramatically reduced Pb emissions.	Health: Causes mental retardation and brain damage, especially in children. Causes liver disease; may be a factor in high blood pressure. Also damages the nervous system. Welfare: No direct impact on vegetation.

3.5.3 State Implementation Plan

The CAA as amended in 1990 (CAAA) mandates that state agencies adopt SIPs that target the elimination or reduction of the severity and number of violations of the NAAQS. SIPs set forth plans to expeditiously achieve and maintain attainment of the NAAQS. The SIP applicable to this nonattainment area is the *Final State Implementation Plan Revision, Phase I Attainment Plan* (Metropolitan Washington Council of Governments [MWCOG], October 1997) and *State Implementation Plan Revision, Phase II Attainment Plan for the Washington DC-MD-VA Nonattainment Area* (MWCOG, February 3, 2000).

The SIP sets forth how emissions that contribute to the formation of O₃ will be reduced by 15 percent from 1990 to 1996, and then by three percent per year until the area reaches attainment of the NAAQS. The attainment date for the Washington metropolitan area was 1999, necessitating a 24 percent total reduction in emissions. A plan for reducing emission levels by 15 percent from 1990 to 1996 was approved by the Metropolitan Washington Air Quality Committee (MWAQC) in December 1993. Subsequently, a Post-1996 Rate of Progress Plan was developed and approved by MWAQC in October 1997 with revisions in April 1999. This plan shows how the additional nine percent in reductions required by 1999 will be achieved.

The Phase II Attainment Plan evaluates whether the measures included in the Phase I nine percent plan and other steps being taken are adequate to reach attainment in the Washington metropolitan area. As part of the Phase II Plan, the Washington region must submit a demonstration using an urban air quality model to show that O₃ concentrations will be reduced to levels below the NAAQS. However, the modeling results show that even with the local measures required to meet the 24 percent rate of progress requirement, air quality in the region will only meet the O₃ NAAQS if overwhelming transport of pollutants into the region from other areas is reduced. MWAQC anticipates that the Washington metropolitan area will attain the O₃ standard based upon data from the ozone seasons in 2003-2005. Therefore, MWAQC, the states of Maryland and Virginia, and the District of Columbia are requesting an extension of the 1999 attainment date until 2005.

3.5.4 Local Ambient Air Quality

Air quality data for Virginia are collected by the Virginia Department of Environmental Quality (VDEQ) at representative sites throughout the state. The most recent available data (for the year 2000) from nearby monitoring stations are used to describe the existing ambient air quality at Ft. Belvoir (Table 3-12). The measured ambient air concentrations were well below the corresponding NAAQS except for O₃. The O₃ exceedence is expected since the region within which Ft. Belvoir and the O₃ monitoring sites are located has been designated an O₃ nonattainment area.

Table 3-12

Local Ambient Air Quality

Pollutant and Averaging Time	Monitored Data	Primary Standard	Secondary Standard	Monitoring Site Location
Carbon Monoxide 8-hour maximum (ppm) 1-hour maximum (ppm)	2.4 3.1	9 35	9 35	Franconia, Lee District Park
Nitrogen Dioxide Annual Arithmetic Mean (ppm)	0.009	0.053	0.053	Long Park, Prince William County
Ozone 8-hour maximum (ppm) 1-hour maximum (ppm)	0.101 0.125	0.08 0.12	0.08 0.12	2675 Sherwood Hall Lane
Particulate Matter (PM _{2.5}) Annual Arithmetic Mean ($\mu\text{g}/\text{m}^3$) 24-hour Maximum ($\mu\text{g}/\text{m}^3$)	14.1 37.5	15 65	15 65	Lee District Park
Particulate Matter (PM ₁₀) Annual Arithmetic Mean ($\mu\text{g}/\text{m}^3$) 24-hour Maximum ($\mu\text{g}/\text{m}^3$)	23 54	50 150	50 150	Manassas Health Department, Prince William County
Sulfur Dioxide Annual Arithmetic Mean (ppm) 24-hour Maximum (ppm) 3-hour Maximum (ppm)	0.011 0.037 0.057	0.030 0.140 -	- - 0.500	1437 Balls Hills Road
Lead Quarterly Maximum ($\mu\text{g}/\text{m}^3$)	0.102	1.5	1.5	Manassas Health Department, Prince William County
Source: Virginia Ambient Air Monitoring 2000 Data Report, VDEQ.				

3.5.5 Mobile Sources

Primary automobile-related or mobile-source air pollutants are CO, NO_x and volatile organic compounds (VOCs). Lead emissions from automobiles are not significant and have declined in recent years through the increased use of unleaded gasoline. Potential emissions of particulates and sulfur dioxide from indirect, mobile sources such as automobiles are insignificant in comparison with direct, non-mobile emission sources such as power plants and industrial facilities. Therefore, only vehicular CO, NO_x and VOC emissions are considered in this study.

Air quality impacts from traffic (and traffic associated with development projects) are generally evaluated at two scales:

- Microscale: CO, which is emitted predominantly by motor vehicles, is a site-specific pollutant with higher concentrations found adjacent to roadways. As a result, it is usually of concern on a local or microscale basis. CO air quality

impacts are typically evaluated through a microscale analysis of traffic-related emission impacts at specific intersections.

- Mesoscale: NO_x and VOCs, precursors of ozone, are usually of regional concern due to the Northern Virginia nonattainment status for ozone. Potential emission increases from additional vehicle miles traveled (VMT) may affect regional ozone levels and may require a mesoscale impact analysis.

Existing VOCs and NO_x mobile emissions are not site-specific and are considered only on a regional basis (mesoscale), which is beyond the scope of this analysis. However, VOC and NO_x emissions induced by the Proposed Action and Alternatives on the project site need to be analyzed and are further discussed in Subchapter 4.5. A microscale analysis of the localized existing CO concentrations was performed based on the existing traffic conditions discussed in Chapter 3.4 and is detailed below.

Microscale Analysis

The CO microscale air quality analysis is based on procedures outlined in the following documents:

- A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections (USEPA, September 1995).
- Mobile5b User's Guide (USEPA, April 1997).
- MWCOG provided Mobile5b input parameters (Tangirala, January 11, 2000).

Mathematical Models

CO traffic impacts are determined in two steps: 1) vehicle exhaust emission factors are calculated using the USEPA Mobile5b computer model; and 2) these emission factors are subsequently used as input for the USEPA CAL3QHC dispersion model to calculate CO concentrations. The models used are described as follows:

- Mobile5b generates vehicular emission factors based on locality-specific vehicle fleet characteristics including vehicle age, operating mode of vehicles (hot/cold starts), and percentage of oxygenated fuel used. Additionally, Mobile5b can incorporate adopted emission control strategies such as anti-tampering programs and inspection and maintenance (I/M) programs.
- CAL3QHC (Version 2) predicts the level of CO or other pollutant concentrations from motor vehicles traveling near roadway intersections. The model incorporates inputs such as roadway geometry, traffic volumes, vehicular emission rates, and meteorological conditions.

CO Impact Assessment

The worst-case CO impacts were estimated for receptor locations at two intersections during weekday am and pm peak periods. These two intersections are the intersection of Telegraph Road and Beulah Street and the intersection of Telegraph Road and the Defense CEETA entrance. The intersections were selected for modeling based upon the maximum potential increase in traffic and CO impact at the affected roadways.

Locality-specific composite emission factors were estimated using the Mobile5b model with the area-specific input parameters provided by MWCOG. Idle emission rates were determined in accordance with USEPA guidance. The CO analysis model incorporated the emission factors, current traffic volumes and intersection phasing data, and worst-case meteorological conditions. These data were used to determine the maximum air quality impact of the existing roadway conditions.

Total ambient CO concentrations near intersections consist of two components: local source contributions (i.e., vehicular emissions near intersections) and background contribution from other sources, such as stationary sources and natural sources, in the project vicinity. Background CO levels in the Fairfax County area were obtained from the VDEQ (Ballou, February 4, 2000). The one-hour background CO concentration is 6 ppm, and the eight-hour background CO concentration is 3 ppm. A persistence factor of 0.70 was used to convert the one-hour CO concentrations calculated by CAL3QHC to eight-hour concentrations. The persistence factor represents a combination of the variability in both traffic and meteorological conditions.

The predicted worst-case CO impacts are presented in Table 3-13. The worst-case CO conditions occurred during the pm peak period at the intersection of Telegraph Road and Beulah Street and during the am peak period, at the intersection of Telegraph Road and the Defense CEETA entrance. The modeling results indicate no existing violations of the one-hour CO standard of 35 ppm and the eight-hour CO standard of 9 ppm at the modeled intersections.

Table 3-13

Existing Weekday Carbon Monoxide Levels

Intersection Receptor Location	One-Hour Concentration (ppm)	Eight-Hour Concentration (ppm)
Telegraph Road and Beulah Street	9.4	5.4
Telegraph Road and the Defense CEETA Entrance	9.0	5.1
Notes: CO levels include background concentrations of 6 ppm (one-hour) and 3 ppm (eight-hour).		

3.5.6 Stationary Sources

Stationary sources at Ft. Belvoir include 54 boilers, 10 generators, 2 incinerators, 7 underground storage tanks (USTs), a Firefighting Training Facility, and over 225 insignificant sources of air emissions. The insignificant sources include closed sanitary landfills, above ground storage tanks (ASTs), spray painting operations, welding operations, asphalt paving activities, degreasers, oil-water separators, woodworking activities, printing operations, pesticide application activities, residential and other smaller No. 2 fuel oil and natural gas boilers, and emergency generators (Werner, April 24, 2001).

Based on the type of pollutants emitted (criteria pollutants or hazardous air pollutants [HAPs]), the CAAA sets forth permit rules and emission standards for sources of certain sizes. The New Source Performance Standards (NSPS) apply to sources emitting criteria pollutants, while the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to sources emitting HAPs. The USEPA oversees programs for stationary source operating permits (Title V) and for new or modified major stationary source construction and operation (New Source Review).

The Title V major source thresholds (based on the facility's Potential to Emit) applicable to Ft. Belvoir are:

- 50 tons per year (tpy) VOCs or NO_x.
- 100 tpy other criteria pollutants.
- 25 tpy total HAPs.
- 10 tpy for any one HAP.

Fort Belvoir is a major source for NO_x and SO₂. A Title V permit application was submitted for the facility in March 1998. The application was given a completeness review by VDEQ and determined to be complete. The technical review of the application was completed and a draft permit was issued in September 2000. Responses to comments on the draft permit were submitted to VDEQ in January 2001 and a final Title V Permit for the facility is expected in 2002 (Werner, April 24, 2001 and May 2, 2002).

3.5.7 Clean Air Act Conformity

The Clean Air Act Amendments (CAAA) of 1990 expand the scope and content of the Act's conformity provisions in terms of their relationship to a SIP. Under Section 176(c) of CAAA, a project is in "conformity" if it corresponds to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. Conformity further requires that such activities would not:

1. Cause or contribute to any new violations of any standards in any area.

2. Increase the frequency or severity of any existing violation of any standards in any area.
3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The USEPA published final rules on general conformity (40 CFR Parts 51 and 93 in the *Federal Register* on November 30, 1993) that apply to federal actions in areas designated in nonattainment for any of the criteria pollutants under the CAAA. The proposed rules specify *de minimis* emission levels by pollutant to determine the applicability of conformity requirements for a project. In this case, the project area is located in a serious nonattainment region for O₃. For a serious O₃ nonattainment area, the *de minimis* criterion is 50 tpy (45 metric tpy) for both NO_x and VOCs.

An applicability analysis of the Proposed Action under the general conformity rule is presented in Subchapter 4.5.

3.6 Noise

Some noise is caused by activities essential to the health, safety, and welfare of the community's inhabitants, such as emergency vehicle sirens, garbage collection operations, and construction and maintenance equipment. Other sources of noise, such as traffic and aircraft, arise from the movement of people and goods, activities that are essential to the viability of the community or region as a place to live and do business. Although these and other noise-producing activities are endemic to modern life in many places, the noise they produce is sometimes undesirable and may detract from the quality of the environment.

Existing noise levels in the vicinity of Fort Belvoir are typical of those normally associated with nearby land uses and the overall level of development in the area, which can be classified as suburban. The primary source of noise near the site is vehicular traffic.

For a typical suburban area with associated traffic conditions, noise levels are normally about 50 decibels (dBA) of background noise and about 70 dBA near sidewalks adjacent to traffic routes. Table 3-14 presents general noise levels for some common sources and receptor locations.

Table 3-14

Noise Levels from Common Sources

Noise Source	Level (dBA)
Air Raid Siren at 50 Feet	120
On Platform by Passing Subway	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Autos with Mufflers	70
Typical Urban Area Background/Busy Office	60
Typical Suburban Area Background	50
Quiet Suburban Area at Night	40
Typical Rural Area at Night	30
Source: City of New York. Environmental Quality Review Technical Manual. December 1993.	

The Fairfax County Comprehensive Plan's noise policy minimizes the potential for noise and land use conflicts by using noise-compatible planning strategies. Fort Belvoir, while not subject to the Fairfax County noise policies or ordinances, has no activities that conflict with the local or federal standards and guidelines affecting human health and safety (US Army Garrison Fort Belvoir, 1999).

3.7 Infrastructure

The proposed increase in personnel and construction of new facilities to accommodate those new hires would generate additional demands for utilities such as potable water, wastewater collection and treatment, and electricity. The new constructions would generate stormwater runoff requiring treatment. Therefore, the existing infrastructure and availability of the relevant utilities is described for the site of the Proposed Action.

3.7.1 Water Supply

The Fairfax County Water Authority Water supplies water to Defense CEETA from two sources. The primary source is a 16-inch [in] (40-centimeters [cm]) line that ends at Defense CEETA at the intersection of Telegraph Road and Road B. The second source is Defense CEETA's